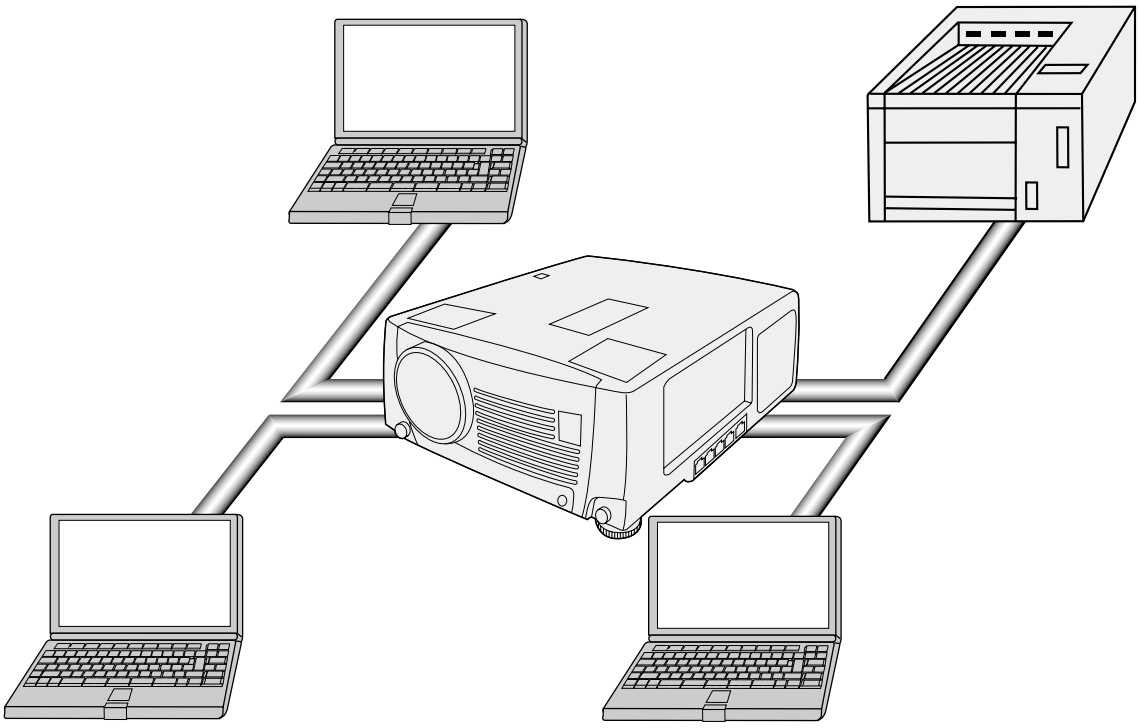
MITSUBISHI

# Smart Hub Networking System User Manual



# *Connection*

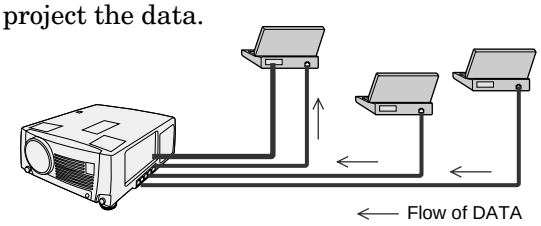
## What you can do with HUB

This projector is equipped with a relaying HUB.
You can do:

– Easy Data (File) Exchange
– Projection of the data in the computers connected via the HUB
– Connection with an existing LAN
– Print out through a Network printer

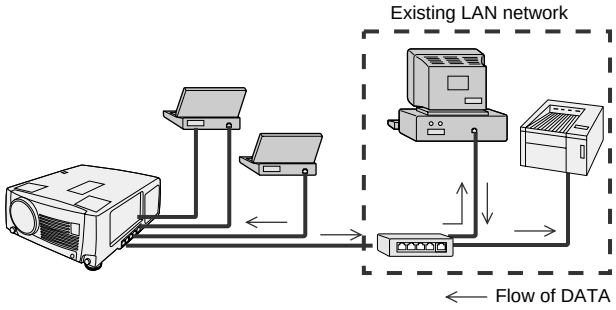
## Example of Network System

1) Connect laptop computers directly to the internal HUB. Copy data to the computer which is connected to this projector with RGB connection, and project the data.




- You can also send presentation data to other computers easily.

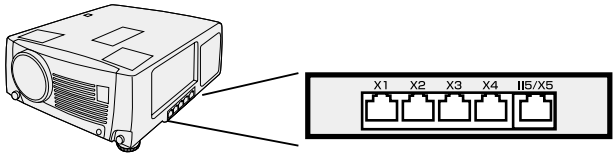
2) Connect an existing LAN network to the internal HUB. Print out data through a Network printer which is connected to the existing LAN.



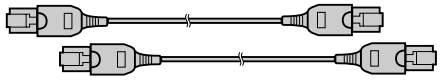

- Read out data using the computer which has the IP address of the existing LAN network and then print them out.
- A printer driver, etc. may be necessary for printing. Please refer to the owner's guide of the printer.

## Required Hardware

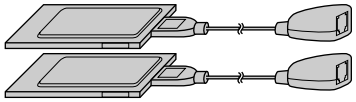
1. HUB TERMINAL (built-in)



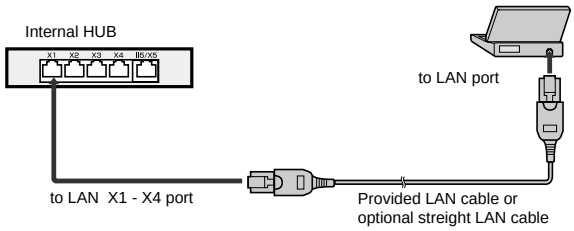

2. LAN CABLE (at least 2 cables, included in the box.)



3. LAN CARD (Network Card)
   Some computers have a built-in LAN port. If your computer doesn't have one, you need at least two LAN cards.
   - They are not included in the box.



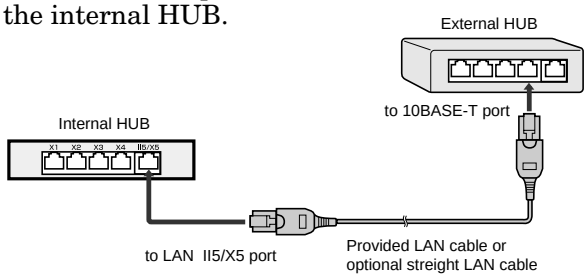
## Connection with a computer




- When connecting computers, use the LAN X1 - X4 port of the internal HUB.

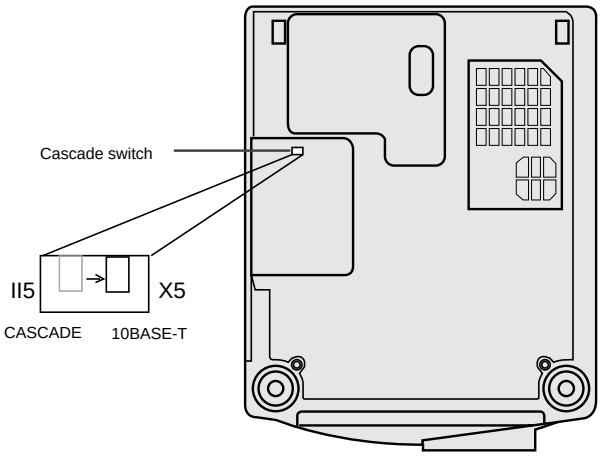
## Connection with an External HUB

For connecting with an existing LAN, you should connect the computers to the external HUB via the internal HUB.




- When connecting with an external HUB, use the LAN II5/X5 port of the internal HUB.
- The external HUB is not included in the box.

When connecting five computers, use an external HUB or set the LAN II5/X5 port to X5 (10BASE-T) by switching the cascade switch on the bottom face using a rod such as a precision screwdriver.




II5 .... Port for connection with an external HUB.
X5 .... Port for connection with a computer.

## Setting Computers

When building a network only with this projector and computers, make preparations for all the computers to be connected.

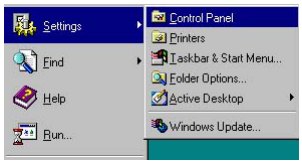
**When using the HUB system, turn on the main switch of the projector. The HUB system doesn't work when the main switch of the projector is off.**

## For Windows Me/98/95

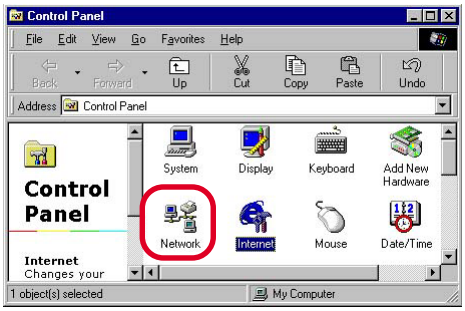
When building a network only with this projector and computers, make the preparations for all the computers to be connected.

### A. Check of "Client for Microsoft Networks" and "NetBEUI"

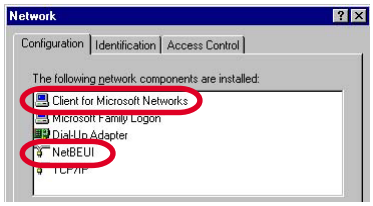
1. Click the **Start** button, point to **Settings**, and then click **Control Panel**.




2. Double-click **Network** to open the Network dialog box.




3. Make sure that **Client for Microsoft Networks** and **NetBEUI** are displayed in the installed network list.
   - If the **Client for Microsoft Networks** is not displayed, go to "**E. Adding Client for Microsoft Network**".
   - If the **Net BEUI** is not displayed, go to "**F. Adding NetBEUI**".

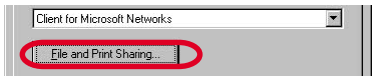



For Windows 98 or Windows Me

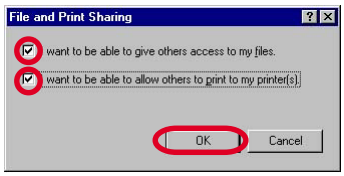
4. Set **Primary Network Logon** to **Client for Microsoft Networks**.

### B. Adding File and printer sharing for Microsoft Networks

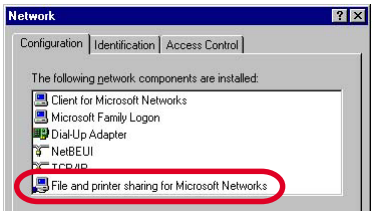
1. Click the **File and Print Sharing** button.




2. Check the check boxes of **I want to be able to give others access to my files** and **I want to be able to allow others to print to my printer(s)**, and then click **OK**.

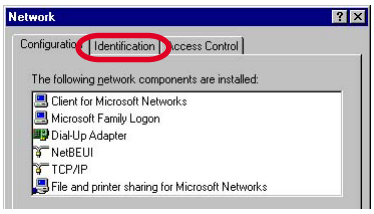

File and Print Sharing
want to be able to give others access to my files.
want to be able to allow others to print to my printer(s).
OK
Cancel

- The **File and printer sharing for Microsoft Networks** appears in the installed network list.

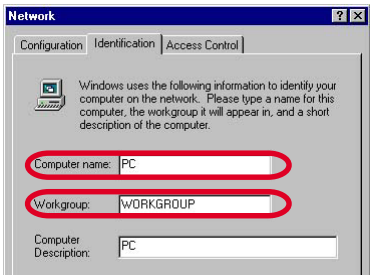


## C. Check of Computer name and Workgroup

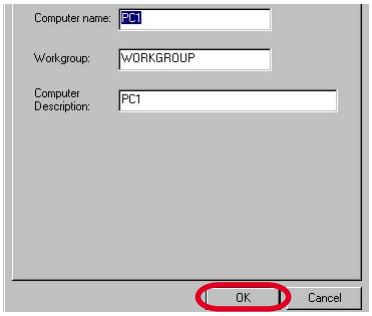
1. Click **Identification** tab.




2. Make sure that Computer name and Workgroup are correct.


Network
Configuration
Identification
Access Control
Windows uses the following information to identify your computer on the network. Please type a name for this computer, the workgroup it will appear in, and a short description of the computer.
Computer name: PC
Workgroup: WORKGROUP
Computer Description: PC

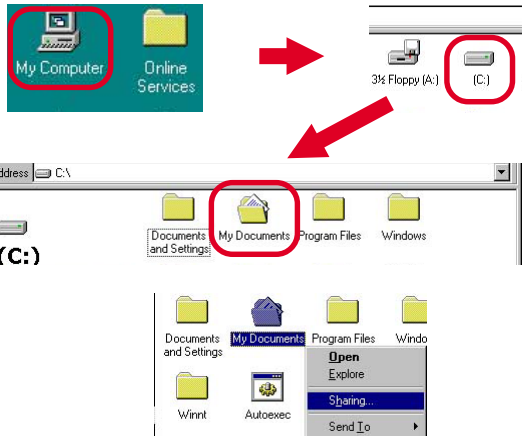
3. Click **OK**.
   - You must restart your computer before the new settings will take effect.



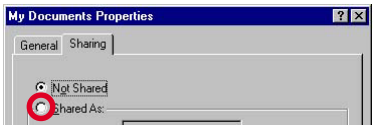

## D. Sharing computer

1. In **My Computer**, right-click the icon of the folder you want to share with others, and then click **Sharing**.

**(Example: When sharing My Documents folder.)**

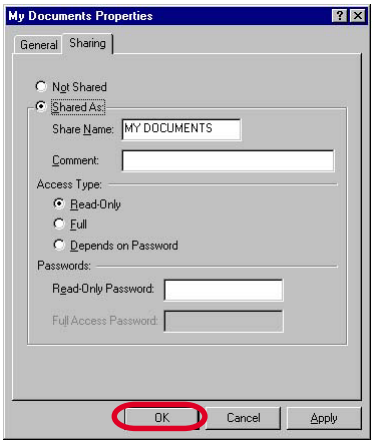


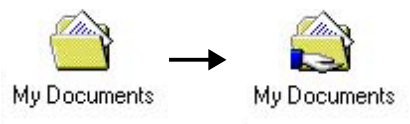

2. In the **Properties** dialog box, click **Shared As**.




3. In **Share Name**, type a name for the folder.
   In **Comment**, you can type a brief comment or description of the folder.

4. Click **OK**.
   - The folder icon changes to an icon with a hand, indicating that the folder is now shared.

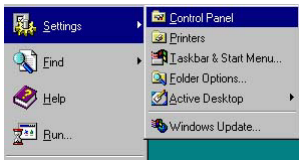



5. Go to "**G. Using files and printers controlled by other computers**"

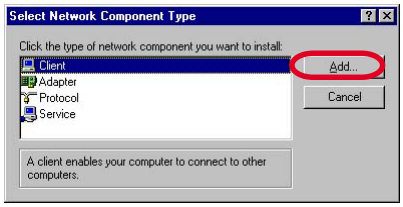
## E. Adding Client for Microsoft Networks

1. Click the **Start** button, point to **Settings**, and then click **Control Panel**.



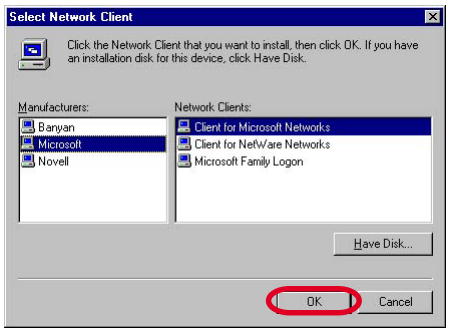

2. Double-click **Network** to open the Network dialog box.

3. Click **Client**, and then click **Add**.
   - A list of client software appears.

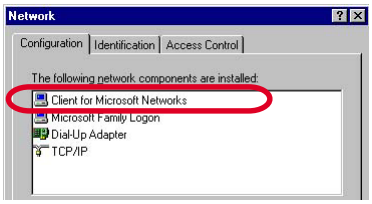



4. In the **Manufacturers** list, click **Microsoft**.

5. In the **Network Clients** list, select **Client for Microsoft Networks**, and then click **OK**.



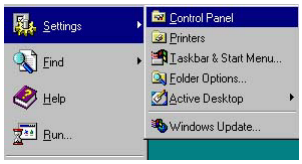

   - The **Client for Microsoft Networks** is added to your computer.



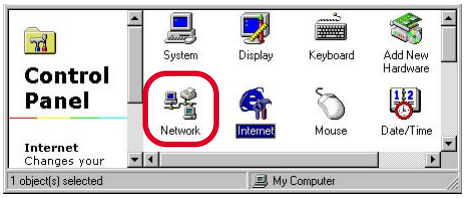

6. Go to "**A. Check of "Client for Microsoft Networks" and "NetBEUI"**"

## F. Adding NetBEUI

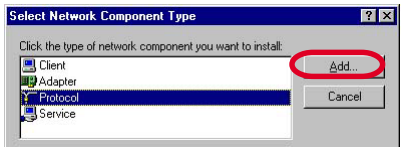
1. Click the **Start** button, point to **Settings**, and then click **Control Panel**.

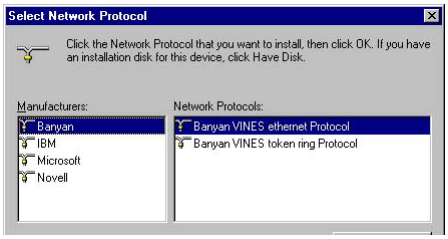



2. Double-click **Network** to open the Network dialog box.



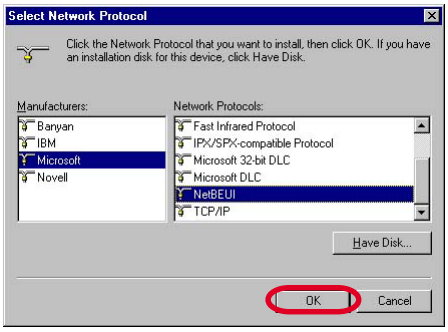

3. Click **Protocol**, and then click **Add**.
   - A list of client software appears.



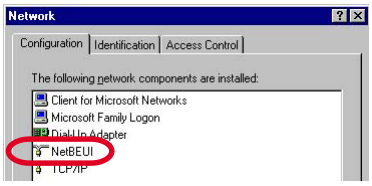


Select Network Protocol
Click the Network Protocol that you want to install, then click OK. If you have an installation disk for this device, click Have Disk.
Manufacturers:
Banyan
IBM
Microsoft
Novell
Network Protocols:
Banyan VINES ethernet Protocol
Banyan VINES token ring Protocol

4. In the **Manufacturers** list, click **Microsoft**.

5. In the **Network Protocols** list, select **NetBEUI**, and then click **OK**.




   - The **NetBEUI** is added to your computer.

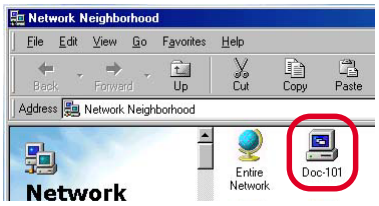



6. Go to "**A. Check of "Client for Microsoft Networks" and "NetBEUI"**"

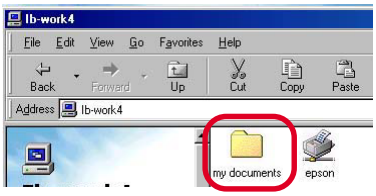
## G. Using files and printers controlled by other computers

1. Double-click **Network Neighborhood** icon.

2. Double-click the icon for the computer that controls the folder you want to use.

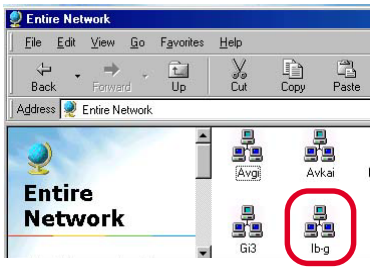



3. To use a shared folder, double-click its icon.

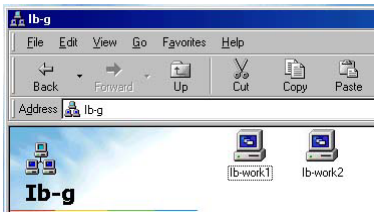



- If the computer you are looking for is not in your workgroup in step 2:
  1. Double-click **Entire Network** icon.

  2. Double-click the appropriate workgroup.




  3. Double-click the icon for the computer that controls the folder you want to use.

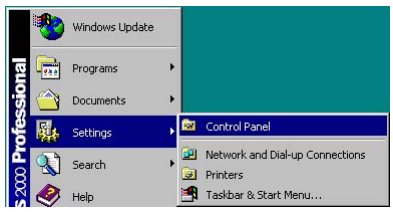


## For Windows 2000

When building a network only with this projector and computers, make the preparations for all the computers to be connected.

### A. Check of "File and Printer Sharing for Microsoft Networks", "Client for Microsoft Networks" and "NetBEUI protocol"

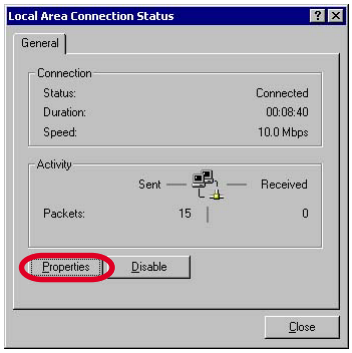
1. Click the **Start** button, point to **Settings**, and then click **Control Panel**.




2. Double-click **Network and Dial-up Connections** to open the Network dialog box.

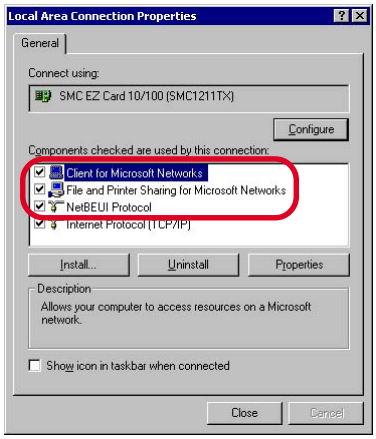
3. Right-click **Local Area Connection** and then click **Properties** to open the **Local Area Connection properties** dialog box.

4. Make sure that **File and Printer Sharing for Microsoft Networks, Client for Microsoft Networks** and **NetBEUI Protocol** are displayed in the installed network list.
   - If the **File and Printer Sharing for Microsoft Networks** is not displayed, go to "**D. Adding File and printer sharing for Microsoft Networks**".
   - If the **Client for Microsoft Networks** is not displayed, go to "**E. Adding Client for Microsoft Network**".
   - If the **NetBEUI Protocol** is not displayed, go to "**F. Adding NetBEUI**".



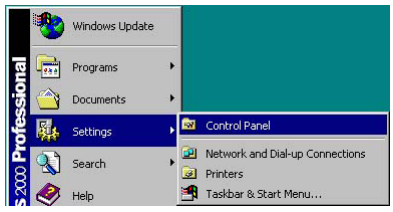

5. Make sure that the check boxes of **File and Printer Sharing for Microsoft Networks, Client for Microsoft Networks** and **NetBEUI Protocol** are checked.

6. Click **Close**.

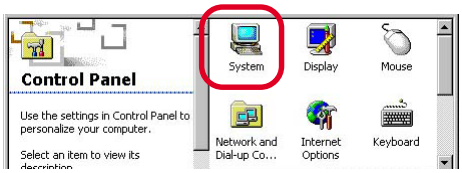



### B. Check of Computer name and Workgroup

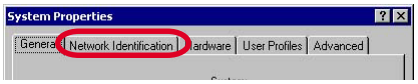
1. Click the **Start** button, point to **Settings**, and then click **Control Panel**.




2. Double-click **System** to open the Network dialog box.

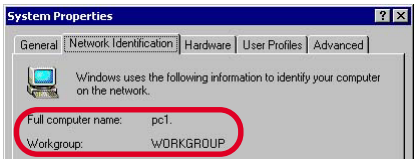


3. Click **Network Identification** tab.

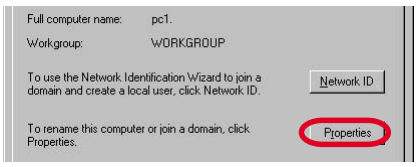



4. Make sure that Full computer name and Workgroup are correct.

5. Click **OK**.

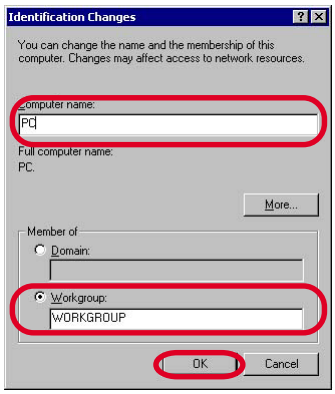



- If they are not correct, change the computer name and Workgroup as follows:
  1. Click **Properties**.


Full computer name: pc1.
Workgroup: WORKGROUP
To use the Network Identification Wizard to join a domain and create a local user, click Network ID.
Network ID
To rename this computer or join a domain, click Properties.
Properties

  2. Input a new computer name or Workgroup.

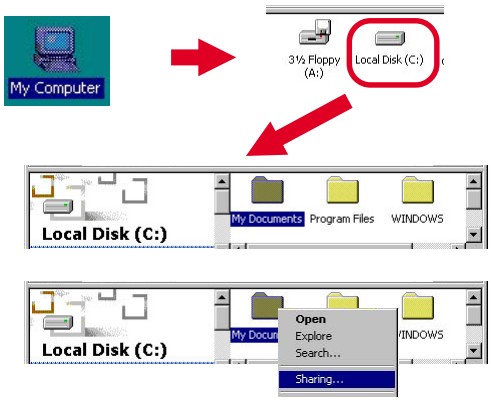
  3. Click **OK**.




## C. Sharing computer

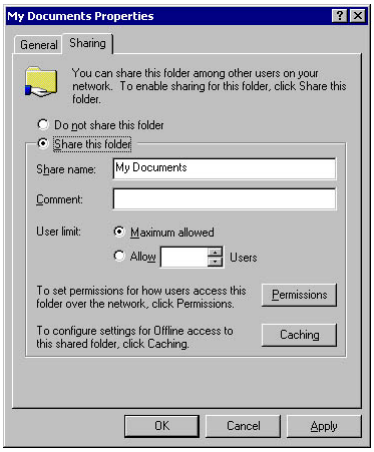
1. In **My Computer**, right-click the icon of the folder you want to share with others, and then click **Sharing**.

**(Example: When sharing My Documents folder.)**

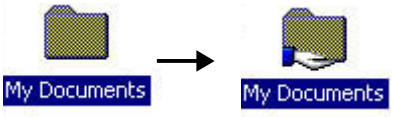



2. In the **Properties** dialog box, click **Sharing** tab, and then click **Shared this folder**.

3. In **Share Name**, type a name for the folder.
   In **Comment**, you can type a brief comment or description of the folder.


My Documents Properties
General
Sharing
You can share this folder among other users on your network. To enable sharing for this folder, click Share this folder.
Do not share this folder
Share this folder
Share name: My Documents
Comment:
User limit: Maximum allowed
Allow Users
To set permissions for how users access this folder over the network, click Permissions.
Permissions
To configure settings for Offline access to this shared folder, click Caching.
Caching
OK
Cancel
Apply

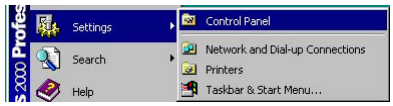
4. Click **OK**.
   - The folder icon changes to an icon with a hand, indicating that the folder is now shared.




5. Go to "**G. Using files and printers controlled by other computers**"

## D. Adding File and Printer Sharing for Microsoft Networks

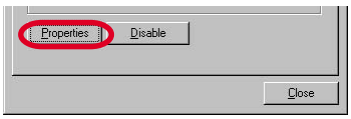
1. Click the **Start** button, point to **Settings**, and then click **Control Panel**.



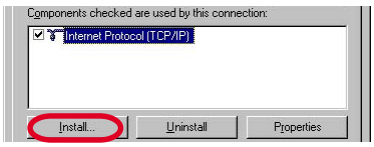

2. Double-click **Network and Dial-up Connections**.

3. Right-click **Local Area Connection**

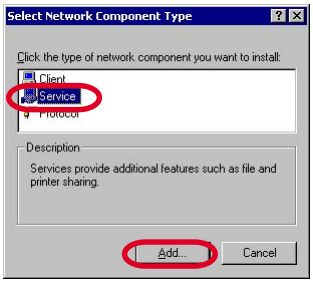
4. Click **Properties** to open the **Local Area Connection properties** dialog box.




5. Click **Install**.

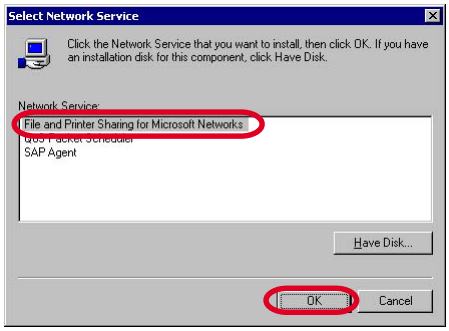



6. Click **Service**, and then click **Add**.

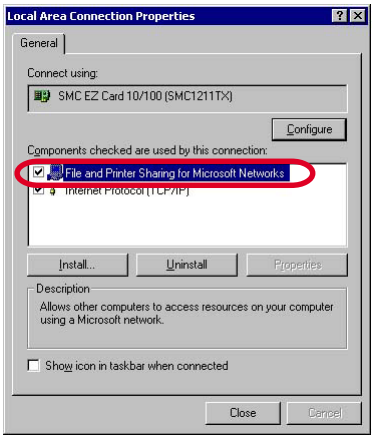



- A list of Network Service appears.

7. In the **Network Service** list, select **File and Printer Sharing for Microsoft Networks**, and then click **OK**.


Select Network Service
Click the Network Service that you want to install, then click OK. If you have an installation disk for this component, click Have Disk.
Network Service:
File and Printer Sharing for Microsoft Networks
SAP Agent
Have Disk...
OK
Cancel

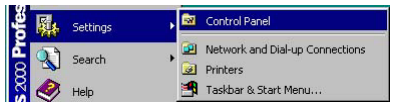
- The **File and Printer Sharing for Microsoft Networks** appears in the installed network list.




8. Go to **A. Check of "File and Printer Sharing for Microsoft Networks", "Client for Microsoft Networks" and "NetBEUI protocol".**

## E. Adding Client for Microsoft Networks

1. Click the **Start** button, point to **Settings**, and then click **Control Panel**.

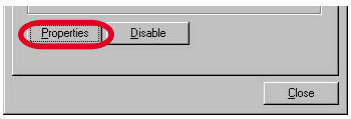



2. Double-click **Network and Dial-up Connections**.

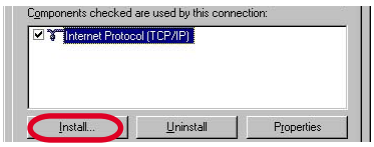
Use the settings in Control Panel to personalize your computer.
Select an item to view its
Network and Dial-up Co...
Internet Options
Keyboard

3. Right-click **Local Area Connection**

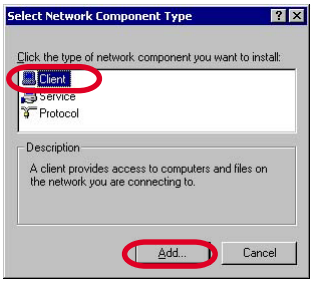
4. Click **Properties** to open the **Local Area Connection properties** dialog box.




5. Click **Install**.

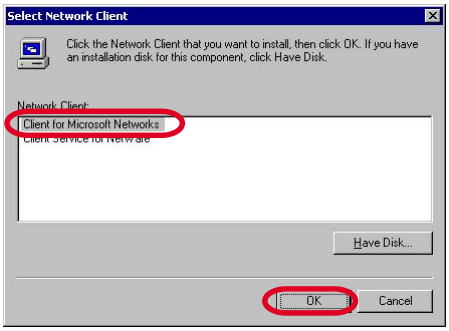



6. Click **Client**, and then click **Add**.

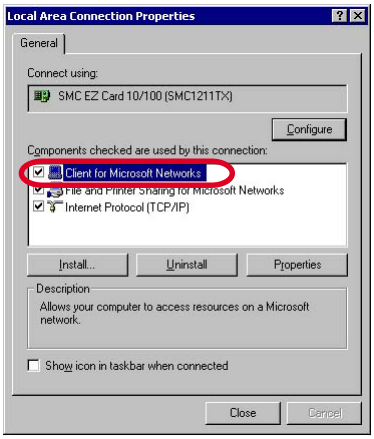



- A list of client software appears.

7. In the **Network Clients** list, select **Client for Microsoft Networks**, and then click **OK**.


Select Network Client
Click the Network Client that you want to install, then click OK. If you have an installation disk for this component, click Have Disk.
Network Client:
Client for Microsoft Networks
Have Disk...
OK
Cancel

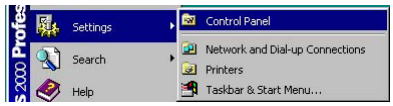
- The **Client for Microsoft Networks** appears in the installed network list.




6. Go to **A. Check of "File and Printer Sharing for Microsoft Networks", "Client for Microsoft Networks" and "NetBEUI protocol".**

## F. Adding NetBEUI

1. Click the **Start** button, point to **Settings**, and then click **Control Panel**.

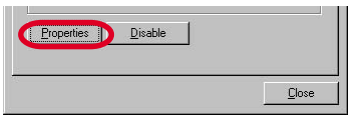



2. Double-click **Network and Dial-up Connections**.

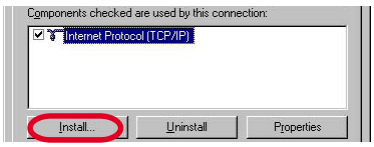
Use the settings in Control Panel to personalize your computer.
Select an item to view its
Network and Dial-up Co...
Internet Options
Keyboard

3. Right-click **Local Area Connection**

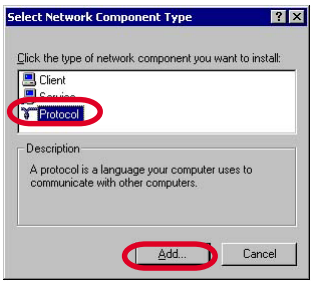
4. Click **Properties** to open the **Local Area Connection properties** dialog box.




5. Click **Install**.

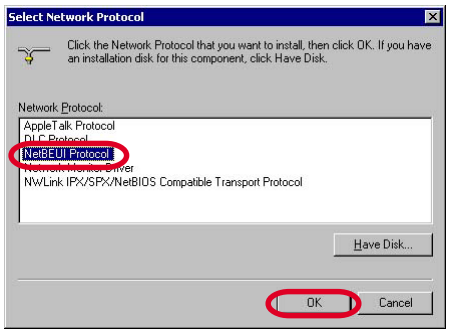



6. Click **Protocol**, and then click **Add**.


Select Network Component Type
Click the type of network component you want to install:
Client
Protocol
Description
A protocol is a language your computer uses to communicate with other computers.
Add...
Cancel

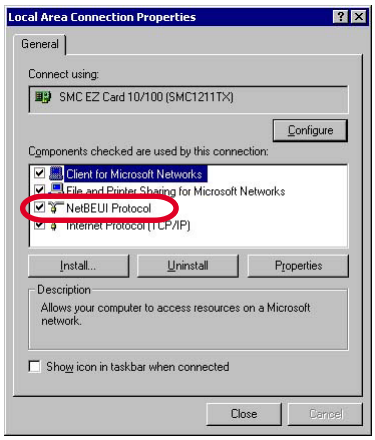
- A Network protocols list appears.

5. In the **Network Protocols** list, select **NetBEUI Protocols**, and then click **OK**.


Select Network Protocol
Click the Network Protocol that you want to install, then click OK. If you have an installation disk for this component, click Have Disk.
Network Protocol:
AppleTalk Protocol
NetBEUI Protocol
NWLink IPX/SPX/NetBIOS Compatible Transport Protocol
Have Disk...
OK
Cancel

- The **NetBEUI Protocol** appears in the installed network list.

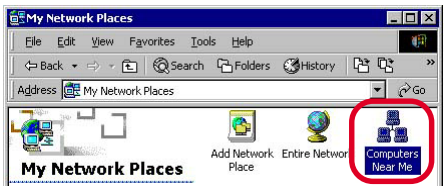
6. Go to **A. Check of "File and Printer Sharing for Microsoft Networks", "Client for Microsoft Networks" and "NetBEUI protocol".**



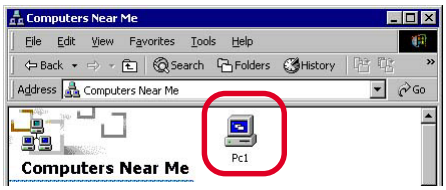
## G. Using files and printers controlled by other computers

1. Double-click **My Network Places** icon.

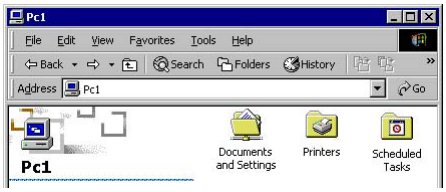
2. Double-click **Computers Near Me** icon.



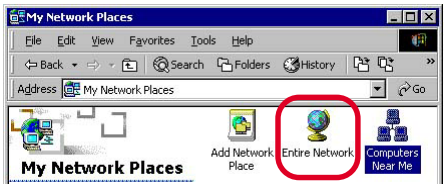

3. Double-click the icon for the computer that controls the folder you want to use.



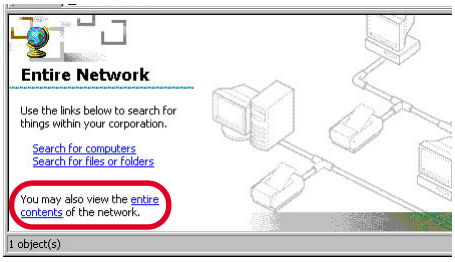

4. To use a shared folder, double-click its icon.



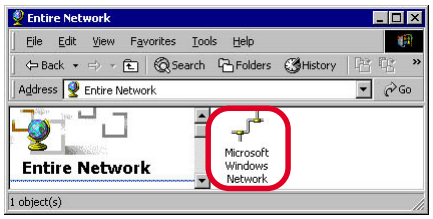

- If the computer you are looking for is not in your workgroup:
  1. Double-click **Entire Network** icon.



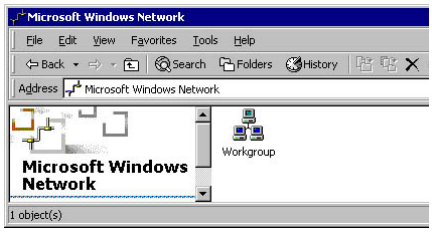

  2. Click **entire contents**.


Entire Network
Use the links below to search for things within your corporation.
Search for computers
Search for files or folders
You may also view the entire contents of the network.
1 object(s)

  3. Double-click **Microsoft Windows Network** icon.




  4. Double-click the appropriate workgroup.




  5. Double-click the icon for the computer that controls the folder you want to use.

# *Troubleshooting*

| PROBLEMS | CAUSE | POSSIBLE SOLUTIONS |
|---|---|---|
| Can't access other computers on the network. | • The main power switch of the projector isn't turned on.<br>• The LAN cable isn't connected properly.<br>• The LAN cable is broken.<br><br>• The connected computers (LAN cards) don't support a 10BASE-T.<br>• The external HUB connected isn't set to support a 10 BASE-T and half-duplex.<br><br>• The password wasn't entered when the Windows started.<br>• The network is being searched now, or the computer is now waiting other computers on the network to be presented.<br>• The settings of the working group is wrong.<br>• The network isn't set correctly.<br><br>• The computer is connected to the II5/X5 port.<br><br>• The external HUB is connected to any of the X1 to X4 ports.<br><br>• The cascade switch on the bottom is set to X5.<br>• The other computer is Macintosh. | • Turn on the main power switch of the projector.<br>• Connect the LAN cable properly.<br>• Check the LAN cable isn't broken by replacing it with another LAN cable.<br>• Use a LAN card supporting a 10BASE-T.<br><br>• Set the external HUB to support a 10BASE-T and half-duplex. See the operation guide of the HUB for setting.<br>• Enter the password when Windows starts and click on the OK button.<br>• Select [Start] - [Search] - [Other computers] to search for other computers.<br><br>• Check the setting of the working group.<br><br>• Check the setting of the sharing status of the protocol and working group.<br>• Connect the computer to any of the X1 to X4 ports, or set the cascade switch on the bottom to X5.<br>• Connect the external HUB to X5 port. In this time, Make sure that the cascade switch on the bottom is set to II5.<br>• Set the cascade switch on the bottom to II5.<br>• Generally, the Microsoft Windows network can't access AppleTalk network directly. |
| Can't share the folder. | • The password wasn't entered when Windows started.<br>• The file or printer sharing isn't valid. | • Enter the password when Windows starts and click on the OK button.<br>For Windows Me/95/98<br>• Click on the check box in the [**File and Print Sharing**] dialog box to share the folder.<br>For Windows 2000<br>• Click the check box for **sharing the file or printer on the Microsoft network** shown by the components structure in the [**Local area connection property**] dialog box. |
| Can't transmit the data correctly. | • Power noise may occur during data transmission. | • Power noise may occur when the POWER button is pressed to illuminate the light source lamp during data transmission. Do not press the POWER button during data transmission. |

# *Glossary*

**AppleTalk**
A trade mark of Apple Computer Inc., for a local area network standard that is built into Macintosh computers.

**HUB**
A central device for connecting the network cables from each computer. Data are communicated in either way of full-duplex transmission or half-duplex transmission. The internal HUB of this projector supports only half-duplex transmission. Also the internal HUB of this projector supports only 10BASE-T.

**IP address**
A 32-bit code which is used on the Internet or a LAN network. This is separated by periods every 8 bits as 255.255.255.0.

**LAN (Local Area Network)**
A network over a relatively short distance, used within a building. Data are generally communicated with 10BASE-T or 100BASE-TX on this network. The internal HUB of this projector supports only 10BASE-T.

**LAN card (Network card)**
An extension card to be attached to a computer for communication on a LAN network. Use a LAN card which complies to 10BASE-T for connection with the built-in HUB of this projector.

**LAN cable (Network cable)**
A cable to connect computers on a LAN network. Use the cable attached to this projector or a straight cable belonging to the category 3 or above.

**NetBEUI**
One of the protocols which are used for communication between Windows-running computers on a LAN network. This protocol has the following features.
- Suitable for a small-scale LAN network
- Easy setting
- High speed processing

**Protocol (Communication control procedure)**
A set of rules or standard designed so that computers can exchange information on a network. Protocol includes TCP/IP, which is used to control communication on the Internet and NetBEUI, which is used between Windows-running computers on a LAN network.

**Service**
Software to be installed on a computer which provides shared resources. Windows include [**Client for Microsoft Networks**].

**TCP/IP (Transmission Control Protocol / Internet Protocol)**
One of the protocols which are used for communication on a LAN network. This protocol is necessary to directly access the Internet.

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